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Sustainable Periods - Motivations, Barriers and Environmental Impact

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Abstract
Today, menstrual waste is a growing environmental concern, generating substantial non-biodegradable refuse that challenges waste management systems and contributes to environmental pollution. While menstrual waste cannot be eliminated, its volume and environmental impact can be significantly reduced through the use of reusable menstrual products like Menstrual Cups (MC). The present study delves into the motivations behind women's adoption of menstrual cups in India, and its impact on the environment, seeking to understand the factors driving this shift from Other Menstrual Products (OMP). Grounded in Self-Determination Theory (SDT), data from 39 Indian women was collected through semi-structured interviews and analyzed using NVivo 15 software. Findings reveal both Intrinsic Motivations (IM) and Extrinsic Motivations (EM) driving MC adoption. The study also identifies various reasons, such as discomfort or inadequate sanitation facilities, as reasons for re-switching to OMP. Theoretical and managerial implications are discussed, offering brands a nuanced understanding of women's motivations and reasons for switching and re-switching between OMP and MC. These findings can provide valuable insights for policymakers, environmental advocates, industry professionals, marketers, and researchers in promoting sustainable menstruation and responsible consumer choices.

Keywords: *Menstrual Cups (MC), Motives, Menstrual Waste, Environmental Sustainability, Menstrual Hygiene Management (MHM), Self-Determination Theory (SDT)*

1. INTRODUCTION

Menstrual Hygiene Management (MHM) is essential for global well-being, gender equality, and achieving the Sustainable Development Goals (SDGs) (Satoiya et al., 2024; T Ajith & Rasheed, 2024). However, menstrual waste presents a growing environmental challenge, primarily due to the widespread use of disposable sanitary products containing plastics and non-biodegradable materials. These products contribute significantly to global plastic waste, persisting for centuries in landfills and potentially releasing harmful chemicals (Shanmugasundaram & Luthra, 2024). In India, where waste management infrastructure is often inadequate, the environmental impact of menstrual waste is a significant challenge. Reusable menstrual products such as menstrual cups (MC) offer a sustainable alternative, reducing waste and providing long-term financial benefits (Satoiya et al., 2024). Despite the benefits of MC, their adoption in India remains low, with only 5% of women using them, compared to 77.3% relying on sanitary pads (NFHS 5, 2023). This slow uptake is due to socioeconomic barriers, limited accessibility, and a lack of awareness (Van Eijk et al., 2016). However, various efforts such as government initiatives, product innovations, and improved availability through online platforms and retail outlets are making MC more accessible and driving a shift towards greater acceptance. The Karnataka state government recently launched a program to distribute MC to all adolescent girls in government schools, a move that could significantly boost awareness and adoption (Medical Device, 2024). A recent study in Kerala

reported a 92% acceptance rate of MC, highlighting the potential for wider adoption across the country (Arjun Raghunath, 2023). The Indian MC market, though currently a niche, is poised for significant growth. The overall feminine hygiene market in India is expected to grow to INR 115 billion by 2028 from 55 billion in 2023, at a CAGR of around 13% (CMR, 2023). This growth is fueled by growing awareness, improved affordability, and the increasing acceptance of sustainable menstrual products. Manufacturers are consistently innovating to improve product comfort and user experience for women. For example, in March 2021, the Indian start-up Care Form Labs Private Limited introduced a redesigned MC, featuring a user-centered design aimed at making the product easier to use and encouraging more women to make the switch. Additionally, several emerging brands, including SochGreen, Earth Care Solution, Sirona Hygiene Private Limited, and Redcliffe Hygiene Private Limited, are actively expanding the Indian MC market (CMR, 2023).Past studies have highlighted the acceptance of MC, particularly among married and working women in rural settings (Satoiya et al., 2024). This growing adoption is driven by several factors, including the significant cost savings associated with reusable MP (Kambala et al., 2020). Notably, 85% of women are willing to purchase MC for their economic benefits, with one cup lasting up to three years. Additionally, MC are widely regarded as safer and more environmentally friendly alternatives to traditional MP (Chintan et al., 2017). From an academic perspective, prior research has primarily focused on various aspects of MC adoption, including safety (van Eijk et al. 2019; Van Eijk et al. 2016), intention to use (Valentin & Hechanova, 2023), acceptance (Satoiya et al., 2024), and factors influencing the switch from sanitary pads to MC (T Ajith & Rasheed, 2024). Other studies have explored user experiences and challenges (Patel et al., 2023), awareness and knowledge gaps (Davile et al., 2024; Madi et al., 2024), affordability, disposal methods, and the lack of adequate sanitation facilities (Kambala et al., 2020). Despite the significance of this topic, there is a vacuum in the literature specifically focusing on - What are the actual motives of women for switching from Other Menstrual Products (OMP) to MC? How do women's experiences with MC influence their continued use or return to OMP? To our knowledge, no study has attempted to address these questions, leaving a critical gap in understanding the relative impact of these motives and barriers on MC adoption. This research aims to bridge this gap by identifying the key motives and barriers to adapting MC. This study provides actionable insights for consumer behaviour analysis, policy-making, and managerial decisions. This will enable marketers, environmental practitioners, brand managers, and academicians to better identify adoption barriers and promote sustainable menstruation practices. The following are the two research questions that have guided this study are:

- **Research Question (RQ) 1:** What are the motives (intrinsic and extrinsic) of women to switch from OMP to MC
- **Research Question (RQ) 2:** How do women's experiences with MC influence their continued use or return to OMP?

The remaining paper is structured as follows. Section 2 outlines the theoretical background. Section 3 presents the research design along with data collection and data analysis procedure. Section 4 presents the findings, followed by the discussion in Section 5. Section 6 highlights the contributions and implications of the study, and Section 7 concludes the paper.

2. Theoretical background

2.1. Self-determination theory (SDT)

The analysis of motivation as a suitable predictor of the intentions to engage in diverse routines of human behavior (Ryan & Deci, 2017). In this same line, within the theory of motivation, the Self-Determination Theory (SDT) (Deci & Ryan, 2000, 2012; Ryan & Deci, 2017) is well-documented. The authors outline six types of motivation, each varying in how much they are driven by an individual's sense of autonomy: autonomous motivation, integrated motivation, identified motivation, introjected motivation, external motivation, and amotivation. Excluding amotivation—which reflects a lack of intent to act—the other five can be grouped under IM and EM SDT has been widely applied to research exploring motivations behind environmentally responsible behaviors (Baxter & Pelletier, 2020; Sahelices-Pinto et al., 2021). SDT

suggests that people are more likely to consistently engage in eco-friendly behaviors when they are intrinsically motivated, meaning they act from a sense of personal autonomy and self-initiative, pursuing meaningful goals they view as important. On the other hand, individuals who are extrinsically motivated might also participate in sustainable actions, but often do so out of a sense of pressure, obligation, or the need for validation either to align with their own internal standards or to meet the expectations of others. In support of this, investigations framed under this theoretical framework have shown that the frequency of engaging in a range of pro-environmental behaviors, such as recycling, energy-saving, conserving resources, purchasing environmentally-friendly products, and employee or green information technology behaviors, increases when grounded by intrinsic motivations (Pugno & Sarracino, 2021). Also, it has been found that people with stronger self-determined motivational types were more likely to perform pro-environmental behaviors that were perceived to be difficult, whereas more extrinsically motivated individuals carried out easier pro-environmental behaviors in terms of time, energy, and personal resources involved (Sahelices-Pinto et al., 2021). To date, limited research has explored the underlying motivations that drive women to adopt MC. Anchored in SDT, this study investigates the diverse motivational factors that influence women's decisions to switch from OMP to MC. In this sense, the contribution of the study will be twofold: first, it enhances the understanding of the motivational dynamics behind this shift, an issue in which the related literature is scarce, and second, it provides actionable insights for MC brands to better tailor their offerings to a relevant consumer segment, ultimately supporting long-term sustainable consumption.

2.2 Intrinsic Motives for Switching from OMP to MC

Previous studies have identified several factors contributing to women's propensity to switch from OMP to MC while highlighting the advantages of MC over OMP (Arenas-Gallo et al. 2020; Alva and Gowda 2023; Satoiya et al. 2024; Davile et al. 2024; T Ajith and Rasheed 2024; Rodrigues and Cardoso 2021). Literature regards MC as an eco-friendly alternative (Valentin and Hechanova 2023; Shanmugham, Murugesan, and G 2024; Satoiya et al. 2024; Pednekar et al. 2022; T Ajith and Rasheed, 2024). Research by Hait and Powers (2019) demonstrates the significant environmental benefits of MC, especially the reduced ecological footprints. T Ajith and Rasheed (2024) showed that MC supports minimalism as it provides a sustainable and reusable substitute that lessens the need for single-use sanitary pads. Prior studies have also indicated a high degree of comfort with MC, with women preferring cups over traditional methods. This is credited to the cups' improved fit, dryness, reduced foul smell, and lack of chemicals, which are present in sanitary napkins (Shukla and Sanjeev 2024; Kambala et al. 2020; Pednekar et al. 2022; Kakani and Bhatt 2017). MC offers an effective and convenient alternative for MHM, particularly among urban, educated, and self-reliant women. User experiences indicate that it provides ease of use and saves both time and money compared to OMP (Patel et al., 2023; Satoiya et al., 2024). Phillips-Howard et al., (2016) demonstrated a notable improvement in vaginal health compared to sanitary pads. T Ajith and Rasheed, (2024) observed that women's willingness to switch from traditional pads to MC is related to their health concerns. Unlike sanitary pads, they are less likely to cause rashes and irritation (Eti et al., 2019). The majority of prior studies advocated that MC is a better and more sustainable option when it comes to managing menstrual health, which fulfills the larger objectives of environmental sustainability and public health.

2.3 Extrinsic Motives for Switching from OMP to MC

Several studies have highlighted that menstrual cups provide reliable protection with a low risk of leakage, making them suitable for women with heavy menstrual cycles (Satoiya et al. 2024; Pednekar et al. 2022; Alva and Gowda 2023; van Eijk et al. 2019). Alva and Gowda (2023) suggested that MC offers a practical solution to the difficulties faced by women during heavy menstrual flow. Reusable MC leads to a reduction in sanitary pad waste and expenses (Stewart et al., 2009). Research indicates that those who make their decision based primarily on cost-effectiveness are more likely to take alternative options into account. Therefore, another reason that women are switching to MC is their affordability (T Ajith and Rasheed, 2024; Shanmugham, Murugesan, and G 2024; Alva and Gowda 2023b; Satoiya et al. 2024; Pednekar et al. 2022). The OMPs also have their limitations, like reusable cloth pads needing to be washed

after each use, sanitary pads are often unaffordable due to their high cost (Pravallika S et al., 2023). Pravallika S et al. (2023) showed that many women are willing to adopt MC if they can receive the requisite guidance and peer support. MC requires fewer frequent changes, as it has a greater absorbent capacity, which makes it appropriate for working women (Chintan et al., 2017). Therefore, these behaviors represent IM and EM, as described by SDT. From a literature review point of view, customers' motives for writing fake reviews are summarized in Table 1.

Table 1: Conceptual framework for switching to MC from OMP

Intrinsic Motivation	**Extrinsic Motivation**
Environmental concern	Affordability
Comfort	Peer support
Minimalism	Less need to change frequently
Convenience	Low leakage
Health concerns	Reusable

Source: Author's Compilation

3. Research Methodology (RQ1 and RQ2)

3.1 Research design

To answer RQ1 and RQ2, we followed a qualitative research methodology. A qualitative study approach leads to a better understanding of human behavior (Zaman et al. 2023).

3.2 Data Collection

The data was collected through face-to-face semi-structured interviews. We recruited only those women who had used or were currently using MC using purposive sampling to ensure accurate insights into their motivations. Purposive sampling is widely used to select respondents that are most likely to yield appropriate and useful information, and is a way of identifying and selecting cases that will use limited research resources effectively (Campbell et al., 2020). Data was collected from 39 respondents, aged between 18-45 (within the reproductive age range) (Gharacheh et al., 2021) over three months, from November 2024 to January 2025. Participants were encouraged to elaborate on their experiences, providing in-depth insights into their motivations for switching to MC. Semi-structured interviews were conducted until theoretical saturation was reached. According to Malterud et al. (2016) in a qualitative study, the typical data saturation happens at thirty. Each interview lasted 40 to 55 minutes. The participants' backgrounds and ages varied widely. 2.56% of respondents were below the age of 25, 84.62% were between the ages of 25 and 40, and 12.82% were above 40. The sample consisted of women representing a variety of opinions and backgrounds, encompassing diverse cultural, educational, and socioeconomic contexts. The multilingual researchers performed the interviews in both Hindi and English (masters both Hindi and English perfectly). The researchers agreed on the research procedure to ensure consistency before conducting the interviews. The sample questions were designed based on the theoretical framework and literature review. These questions included: 1. Source of information regarding menstrual cups? 2. Initial switch to menstrual cups was from which of the following menstrual products- Tampons or Sanitary pads, or both? 3. Motives leading to a switch from other menstrual products to menstrual cups. 4. For how long have menstrual cups been used? 5. Would you continue to use menstrual cups? 6. If discontinued or if planning to discontinue, what will be the reason(s)? The Profile of respondents is presented in Table 2 below.

Table 2: Profile of respondents (N=39)

Variable	**Cases (%)**	**Variable**	**Cases (%)**

Age Group		**Initial Switch to MC from**	
Less than 25	1 (2.56)	Sanitary Pads	30 (76.93)
25–40	33 (84.62)	Tampons	1 (2.56)
Above 40	5 (12.82)	Both	8 (20.51)
Marital Status		**How long have you been using MC?**	
Married	30 (76.93)	Less than a year	15 (38.46)
Unmarried	9 (23.07)	More than a year	10 (25.64)
Education Level		More than 2 years	8 (20.51)
Graduate	9 (23.07)	More than 3 years	6 (15.38)
Postgraduate	20 (51.29)	**Would you continue to use MC?**	
PhD	5 (12.82)	Yes	27 (69.2)
Others	5 (12.82)	No	12 (30.8)
Source of MC Awareness			
Social Media	23 (59)		
Friends	22 (56.41)		
Doctor	5 (12.82)		
Relative	2 (5.12)		
Others	2 (5.12)		

Source: Author's Compilation

The table above highlights the profile of respondents who actively use MC. Among the respondents, social media and friends were the primary sources of information about MC, accounting for nearly 59%.

3.3 Data Analysis

Firstly, the interviews were coded into text and converted into the transcript by compiling the responses into a single response sheet for every research question separately. In the next step, cleaning was done to eliminate special characters and spaces from the transcript and a coding dictionary containing the primary motives (i.e., themes) for switching to MC was constructed following the conceptual framework in (Table 1) and previous literature available (e.g., Zaman et al. 2023; Kirova and Vo Thanh 2019). The NVivo 15 software was utilised to conduct a thematic analysis based on this dictionary. As the coding process progressed, emerging themes were discussed and added to the dictionary. This analysis method, using both deductive themes and inductive (emerging) themes derived from the data, complies with the process depicted in the literature (Kirova & Vo Thanh, 2019). To ensure internal validity, the analysis of the first three interviews was conducted collaboratively (Zaman et al., 2023). Subsequently, each author examined the remaining corpus independently with an identical dictionary, adhering strictly to the double coding protocol. The divergences were examined to reach a consensus.

The analysis for RQ2, which explores the reasons for discontinuing MC based on respondents' experience, is summarized in Table 4 in the findings section.

4. Findings

4.1 RQ1-

The thematic analysis results for RQ1 confirm the presence of significant IM and EM of respondents to switch from OMP to MC. Most of the respondents were in the age group of 25–40 years, which shows that younger women are more interested in knowing and adopting innovations. Approximately 76.93% of respondents were married. It was noted that 76.93% of respondents were using sanitary pads, 2.56% of respondents were using tampons, and 20.51% of respondents were using both sanitary pads and tampons before switching to MC. Among the 39 respondents, 38.46 % were using the MC for less than a year, 25.64% for more than a year, 20.51% for more than 2 years, and 15.38% for more than 3 years. The explored IM and EM are explained below-

4.1.1 IM for switching to MC from OMP

Regarding intrinsic motives, our findings reveal some interesting and detailed insights. First mover, Physical activity, ease in traveling, better mobility, and better sleep emerged as new IMs.
Some respondents state that they just wanted to try the MC to explore a new way of managing their menstrual cycle.
R8- *I wanted to try the new product out of curiosity, but I noticed my life improved after using it. I no longer had to worry about changing pads during work.*
Furthermore, our findings indicate that respondents switched to MC for the convenience of engaging in physical activities.
R19- *As an athlete, using a menstrual cup helps me stay active and comfortable during workouts, swimming, and beach time*.
Some mentioned they switched because of frequent travel, needing a dependable option for managing periods on the go, while others valued the increased mobility it provided.
R30- *I switched to using a menstrual cup because of the comfortable, dry feeling it provides while sitting during travel*.
Some respondents reported improved sleep after switching to MC.
R39- *I can comfortably sleep after switching to a menstrual cup, as there are no rashes or irritation.*
Additionally, according to our findings, environmental concern is one of the motives for switching to MC.
R7- *I am a firm advocate of sustainable living; hence, I was looking for an alternative.*
This is consistent with the study by Shanmugham, Murugesan, and G (2024) demonstrates the significant environmental benefits of MC, especially the reduced ecological footprints.
Some respondents stated that MCs are more comfortable and convenient than sanitary pads and tampons.
R11- *With menstrual cups, there is no smell, no wet feeling, and no need to change pads every 2-3 hours.*
This is consistent with the study by Shukla and Sanjeev (2024), which stated that women prefer MC for their comfort, better fit, dryness, reduced odor, and chemical-free design over traditional methods.
We also found that due to health concerns like infections, rashes, and irritation from sanitary pads, many women have switched to MC.
R9- *I found menstrual cups simple to use and more hygienic since there is no blood contact with the body.*
This is in line with Phillips-Howard et al., (2016) who found improved vaginal health with MC over sanitary pads.
Our findings suggest that respondents aim to simplify their belongings and reduce waste by switching to MC.
R5- *I have no tension of carrying an extra pad. Also, periods do not seem like a big thing now.*
This aligns with (T Ajith and Rasheed, 2024) who found that MC promote minimalism by offering a sustainable, reusable alternative to single-use pads.
4.1.2 EM for switching to MC from OMP
"Less need for frequent changes" emerged as a new EM for switching from OMP to MC,
Some respondents explained that they spend long hours sitting in the office and find it more convenient compared to sanitary pads.
R21- *I am a professional, and my work schedule is so busy that I cannot find time to change the sanitary pad, so I switched to the menstrual cup.*
The majority of respondents indicated that their primary reason for switching to MC was affordability.
R18- *Switching to menstrual cups is just like a one-time investment. Then I do not have to spend every month on sanitary pads.*
This is in alignment with the study by T Ajith and Rasheed (2024), which indicates that cost-conscious individuals are more likely to explore alternatives, making affordability a key reason women switch to MC.

Our findings indicate that women who are married and have peer support from friends and colleagues are more likely to use MC.

R17- *I was worried that using a menstrual cup would cause pain and leakage, but since my friends were using it, I decided to try it. Now, I only use menstrual cups.*
This is consistent with the study by Pravallika S et al., (2023) that highlights that women are willing to adopt MC if they can receive the requisite guidance and peer support.
Respondents mentioned switching to MC due to their low leakage and reusability.
R1- *Menstrual cups are a great option because they are reusable and, with proper care, can last for several years*.
This is in line with the research by Chintan et al., (2017) that highlights MCs are reusable and have a larger absorbent capacity, which requires less frequent changes.
A codebook for the motives behind MC users was created, as presented in Table 3. The hierarchy chart by the number of coding references in Figure 1 depicts that "environmental concern" is the most frequent motive used in the responses, followed by comfort, health concern, and others. In Figure 2, a word chart is also presented.

Table 3: Codebook for the MC users drawn from responses

Name	**References**
Intrinsic motivation	**70**
DI Environmental concern	22
DI Comfort	12
DI Health concerns	11
DI Convenience	10
DI Minimalism	2
EI Better sleep	2
EI Better mobility	2
EI Ease in traveling	2
EI Physical activity	5
EI First mover	2
Extrinsic motivation	**21**
DE Affordability	7
DE Peer support	1
DE Less need to change frequently	1
DE Low leakage	5
DE Reusable	4
EE comfortable for longer working hours	3

Note: EI, emerging intrinsic themes; EE, emerging extrinsic themes; DI, deductive intrinsic themes; DE, deductive extrinsic themes.

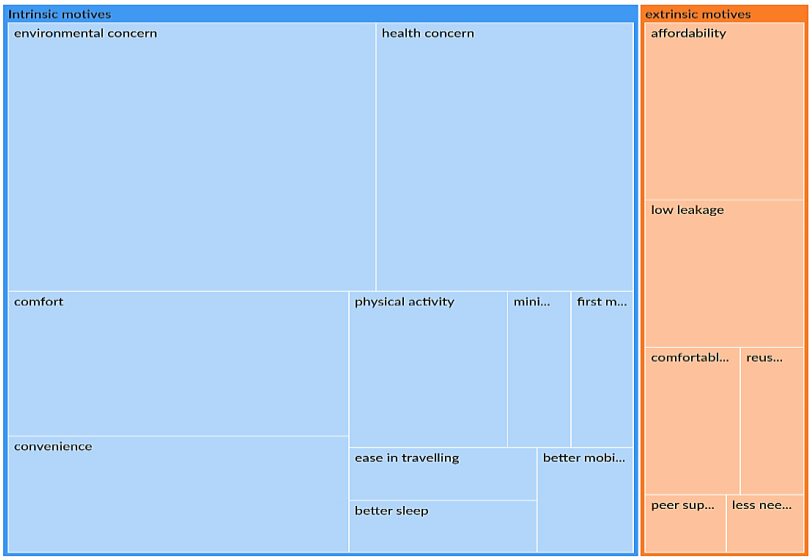

Figure 1. Hierarchy chart by the number of coding references

Figure 2. Word Chart

4.2 RQ2-

The study also examined the actual post-experience of MC users and investigated the reasons for re-switching to OMP. Among 39 respondents, 12 respondents (30.76%) reported that they did not wish to continue with MC based on their experience. To the best of our knowledge, this is the first study to follow up on the actual post-experience of MC users and analyze the reasons for re-switching to OMP. The reasons explored are presented in Table 4. Painful insertion and discomfort are the major reasons, followed by others.

Table 4: Reasons for discontinuing MC usage by respondents

Respondents	**Reasons for discontinuing the use of MC**
R1	Difficulty in the removal of the cup
R4, R19	Abdominal pain
R6	Feeling of disgust
R8	Creating much more mess than pads
R9	Problem of sterilization
R16	Fear of infection
R16, R18, R28	Inserting is painful
R20, R33, R22	Discomfort
R9, R28	Leakage

5. DISCUSSION

This study confirms that both IM and EM influence women's decisions to switch from OMPs to MCs, with environmental concern emerging as the most significant intrinsic driver. The growing awareness of sustainability and the desire to minimize menstrual waste align with previous research (Kaur et al., 2018; T Ajith & Rasheed, 2024), highlighting women's increasing preference for eco-friendly menstrual options. Among IMs, health concerns were a key factor, including irritation, rashes, and infections caused by disposable sanitary products. Additionally, convenience, ease of use, time-saving, and longer wear time were other major drivers. Notably, minimalism, a lifestyle choice focused on reducing waste and simplifying consumption, also played a role in motivating women to opt for reusable MC. Beyond these previously identified motives, our study introduces new IMs, including better sleep, improved mobility, ease of travel, and enhanced participation in physical activities. Women emphasized that MC provides uninterrupted sleep, unlike traditional products that require frequent nighttime changes. Similarly, for working professionals and frequent travelers, MC offers comfort, reliability, and discretion as it stays firmly in place and doesn't move or cause discomfort like traditional pads. Their secure fit allows for hassle-free movement, making them a preferred choice for active lifestyles. Another novel finding was the first-mover motivation of women's willingness to explore innovative menstrual solutions as part of a shift toward greater autonomy in personal health choices. MC is a single, compact item that can be reused throughout the entire menstrual cycle in contrast to traditional menstrual products, which need to be changed frequently and are cumbersome to carry in bulk. Women who were previously constrained by

few options and social conventions are now increasingly exploring and embracing MC. It offers numerous advantages over traditional sanitary products, and women are adopting it as first movers. The initial curiosity to test MC has frequently evolved into a commitment. Extrinsic motivations also played a crucial role. Affordability and reusability stood out as key factors, reinforcing previous findings (Alva & Gowda, 2023; Davile et al., 2024). Literature indicates that the use of a cup significantly reduces the fear of staining clothes during menstruation (Patel et al., 2023; Satoiya et al., 2024). Women with heavy menstrual cycles can use them since they provide reliable (Patel et al., 2023; Satoiya et al., 2024) protection with minimal leakage (van Eijk et al., 2019). Women acknowledged that low leakage risk and longer wear time offered greater convenience, particularly for those with demanding work schedules. Additionally, peer support was a significant external influence, as positive recommendations encouraged many women to make the switch (Pravallika S et al., 2023). The internal placement of cups avoids the odor, dryness, and discomfort of an external pad, hence enriching the user experience (Kakani & Bhatt, 2017). Overall, this study expands the understanding of MC adoption by introducing new motives while reaffirming the central role of environmental concern. These findings provide valuable insights for policymakers and marketers aiming to promote sustainable menstrual solutions.

5.2 RQ2

Several factors influence women's decisions to re-switch from MC to OMP (Table 4). Difficulty in removal is a common challenge for first-time users, often causing discomfort and frustration (Gharacheh et al., 2021; Patel et al., 2023). Some respondents also reported abdominal pain, likely due to incorrect sizing or improper insertion, though research suggests this discomfort decreases with continued use (Ghanshamnani et al., 2021). A key new factor identified in this study is the feeling of disgust stemming from the direct handling of menstrual blood during insertion and removal. Not everyone has the same degree of comfort with their own body and bodily fluids when using an MC because it is an intimate practice. This discomfort, along with concerns about messiness and hygiene, discourages some users. Cleaning, replacing, and inserting the cup can indeed be an unhygienic procedure, particularly for inexperienced users (Patel et al., 2023). Public restroom challenges, where cleaning and reinserting MC can be inconvenient, further reinforce this perception. Additionally, sterilization requirements pose a barrier, as boiling or using sterilizing solutions is seen as cumbersome, and the added cost of sterilizers may deter continued use Kambala et al. 2020). Fear of infection also influences the decision to revert to OMP, as anxiety about bacterial introduction or improper hygiene can discourage MC adoption (Shukla & Sanjeev, 2024). Pain during insertion is another deterrent, especially when users struggle with cup size or technique (Van Eijk et al., 2016). Issues of discomfort and leakage were also noted. An ill-fitting cup, material sensitivity, or pressure on the vaginal walls can cause persistent discomfort, making women abandon MC (Gharacheh et al., 2021). Leakage, particularly during heavy flow, can undermine confidence in MC reliability (Pravallika S et al., 2023; Shukla & Sanjeev, 2024). Since achieving a proper seal can be challenging, users may opt for more familiar, trusted methods like pads or tampons. Overall, while many women continue using MC, various practical and psychological barriers contribute to re-switching. Addressing these concerns through better education, product design improvements, and increased accessibility to sterilization solutions could enhance long-term adoption rates.

6. CONTRIBUTIONS, LIMITATIONS, AND FUTURE RESEARCH

6.1. Theoretical Contributions

First, MCs are highly experiential products, as different brands offer varied features, and their effects can differ from person to person (Park & Lee, 2009). Despite their growing popularity and potential benefits, research on the reasons behind women's transition to MC remains limited. This study addresses this gap by validating existing motives, introducing new drivers, and exploring re-switching behaviors from MC to OMP, along with enriching the literature. Notably, environmental concern emerged as a major IM, reinforcing the sustainability aspect of MC adoption (Table 1). Second, by proposing a new conceptual framework for switching from OMP to MC, this study advances the existing theoretical literature on MC adoption (Table 3). It broadens the scope of the SDT by demonstrating how IM, driven by personal fulfillment, and EM, shaped by external influences, impact switching behavior. When

individuals engage in activities aligned with their values, IM fosters self- satisfaction. This research clarifies the applicability of SDT by integrating both types of motivation in understanding MC usage. Among the new extrinsic motivations, longer working hours emerged as a key driver as MC provides extended protection, reliability, comfort, hygiene, and convenience, making them ideal for working women (Satoiya et al. 2024). Notably, no prior study has identified extended working hours as a switching factor. Similarly, better sleep quality surfaced as an intrinsic motivator, supporting findings by Hennegan et al., (2019) that menstrual discomfort impacts social interactions and confidence. While past research has focused on the educational and psychological impacts of menstrual health, this study highlights its physical aspects. Furthermore, this study highlights the role of women's empowerment in reshaping menstrual hygiene practices. By adopting MC, women assert autonomy over their choices, breaking taboos and embracing solutions that align with their needs and values. Improved mobility, ease of travel, and physical activity also emerged as significant intrinsic motives. This research also sheds light on re-switching behaviors, which are crucial for brands aiming to retain MC users. While most respondents intended to continue using MC, disgust was identified as a unique factor influencing re-switching decisions. Understanding these insights can help brands improve product design, address consumer concerns, and enhance long-term market adoption. By addressing both adoption and discontinuation, this research offers valuable theoretical contributions to sustainability, consumer behavior, and menstrual health management.

6.2. Practical implications

From a managerial standpoint, this study provides valuable insights for MC brands to understand the motives behind women switching to menstrual cups MC from OMP, enabling them to better address customer needs and preferences. First, intrinsic motives like better sleep, since MC can be worn for longer periods, providing uninterrupted rest, and extrinsic motives like accommodating longer working hours and less frequent changes, can be emphasized in marketing strategies. Second, peer support also plays a significant role, and brands can leverage social proof and testimonials to build trust (Pravallika S et al., 2023). Additionally, with environmental concern emerging as a major motive, emphasizing the eco-friendly benefits of MC can attract environmentally conscious consumers and contribute to broader sustainability efforts (T Ajith & Rasheed, 2024). Third, brands can educate consumers through educational campaigns about the health benefits, affordability, minimalism, low leakage, and reusability of MC (Patel et al., 2023; Pednekar et al., 2022; T Ajith & Rasheed, 2024).

Additionally, understanding the reasons why women re-switch from MC to OMP is also important. Addressing problems related to the usage of MC through better product design and usability can increase the comfort level of the users (Chintan et al., 2017). Offering thorough cleaning instructions can reduce worries about safety and hygiene. Brands should try to normalize MC use and eliminate stigma to prevent feelings of disgust and perceptions of mess and leakage (Rodrigues & Cardoso, 2021; van Eijk et al., 2019). Listening to and addressing customer issues are essential to fostering brand loyalty and customers' trust. Brands may better meet the needs of their customers and secure long-term success in the market by comprehending and tackling these concerns.

7. CONCLUSION

Using the SDT framework, this study uncovers new implicit IM and EM influencing women's adoption of MC. Addressing concerns about environmental waste, the study highlights how environmental concern is a key motivator for women's switching to MC as they seek sustainable alternatives to reduce menstrual waste and minimize their ecological footprint. However, the study has certain limitations that suggest directions for future research. The findings are based solely on data from urban women in India, which limits their generalizability across different cultural, socioeconomic, and geographic contexts. Future studies could include cross-national comparisons and examine rural populations, who may face distinct challenges such as limited access, stronger cultural taboos, and inadequate sanitary infrastructure. Additionally, reliance on self-reported data introduces potential bias, thus, employing techniques like topic modeling and natural language processing could uncover deeper, unbiased insights. Despite these limitations, this study offers valuable guidance for industry professionals to design targeted marketing

strategies, refine product features, and promote sustainable menstrual practices that align with both user satisfaction and environmental responsibility.

Statements and Declarations

Conflicts of Interest of each author/ contributor. NIL

Declaration of Financial Interest Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Avaliability Statement

Data will be made available on request.

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